(12) UK Patent Application (19) GB (11) 2 387 901 (13) A

(43) Date of A Publication 29.10.2003

(21) Application No 0201524.6

(22) Date of Filing 23.01.2002

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(51) INT CL[7]
F24C 15/06 // E04F 19/00 , F24B 1/198

(52) UK CL (Edition V)
F4W W49A W49C4

(56) Documents Cited
GB 2240171 A
WO 2000/003184 A1
CA 001013532 A
US 3333555 A

(58) Field of Search
UK CL (Edition T) E1X XS, F4W
INT CL[7] E04F 19/00, F24B 1/198, F24C 15/06 15/12
Other: ONLINE: WPI, EPODOC, JAPIO.

(54) Abstract Title
A fireplace surround assembly with a light source

(57) The fireplace surround assembly comprises a mantel 2 that is arranged to surround a fire 22 and be secured to a wall 18 of a room. A planar display panel 8 is disposed between the wall and the mantel. The display panel is translucent or transparent over at least part of it's surface and a light source 26 is positioned so that light therefrom can be visible through the panel from the front of the assembly. Preferably the light source is at least one fluorescent strip light mounted between the wall and the panel, but it could alternatively be positioned so that light is projected through the thickness of the panel from at least one edge. The display panel is preferably made from glass and is constructed from a plurality of sections comprising two vertical extending sections 10 and a lintel section 12. The display panel may have a textured rear surface produced by engraving or etching. The mantel and panel may be mounted on a hearth 20 which consists of a glass upper panel 30 and a frame 32, with a light source mounted therein such that a uniform glow is projected upwardly through the hearth's upper panel 30. Various lighting effects could be achieved by colour, intensity or position. The surround assembly can be used with an electric or gas fire.

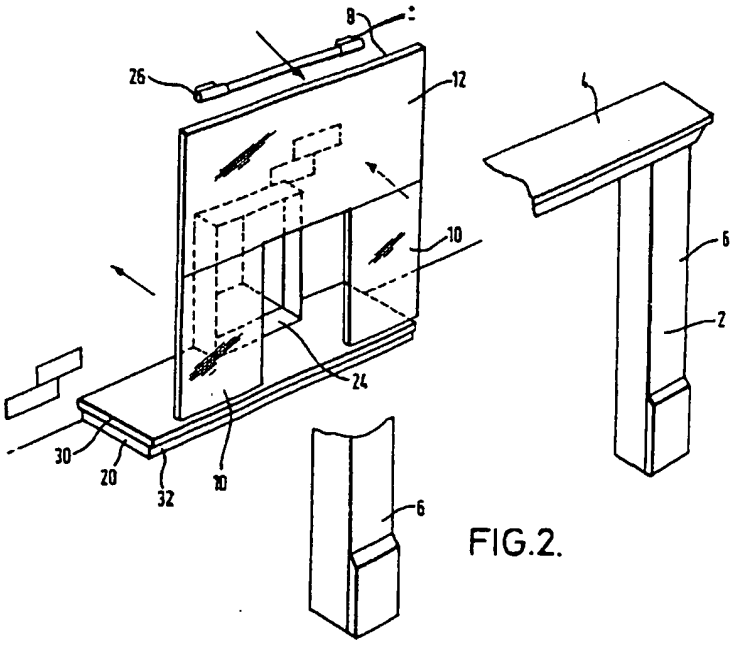

FIG.2.

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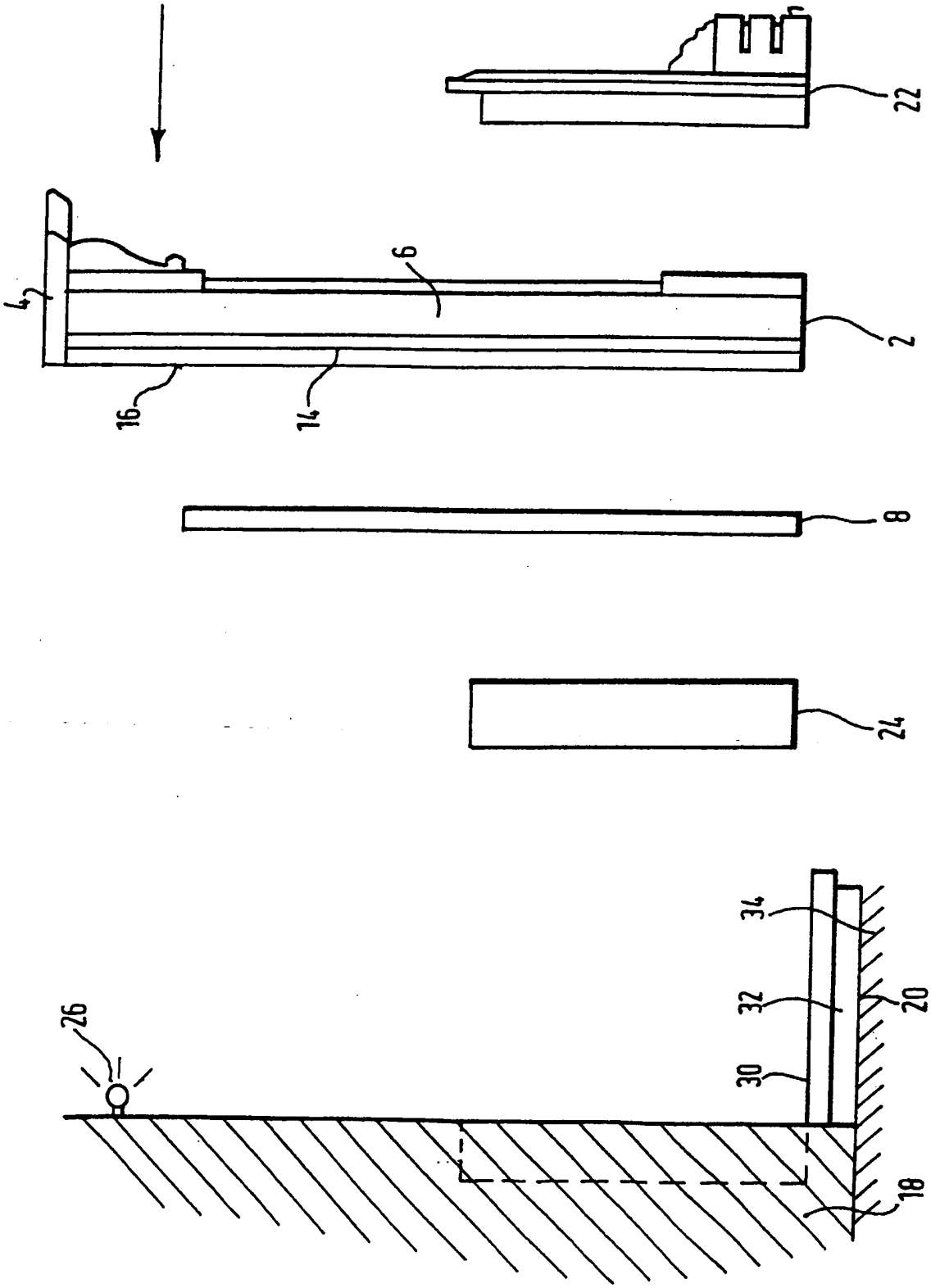

FIG.1.

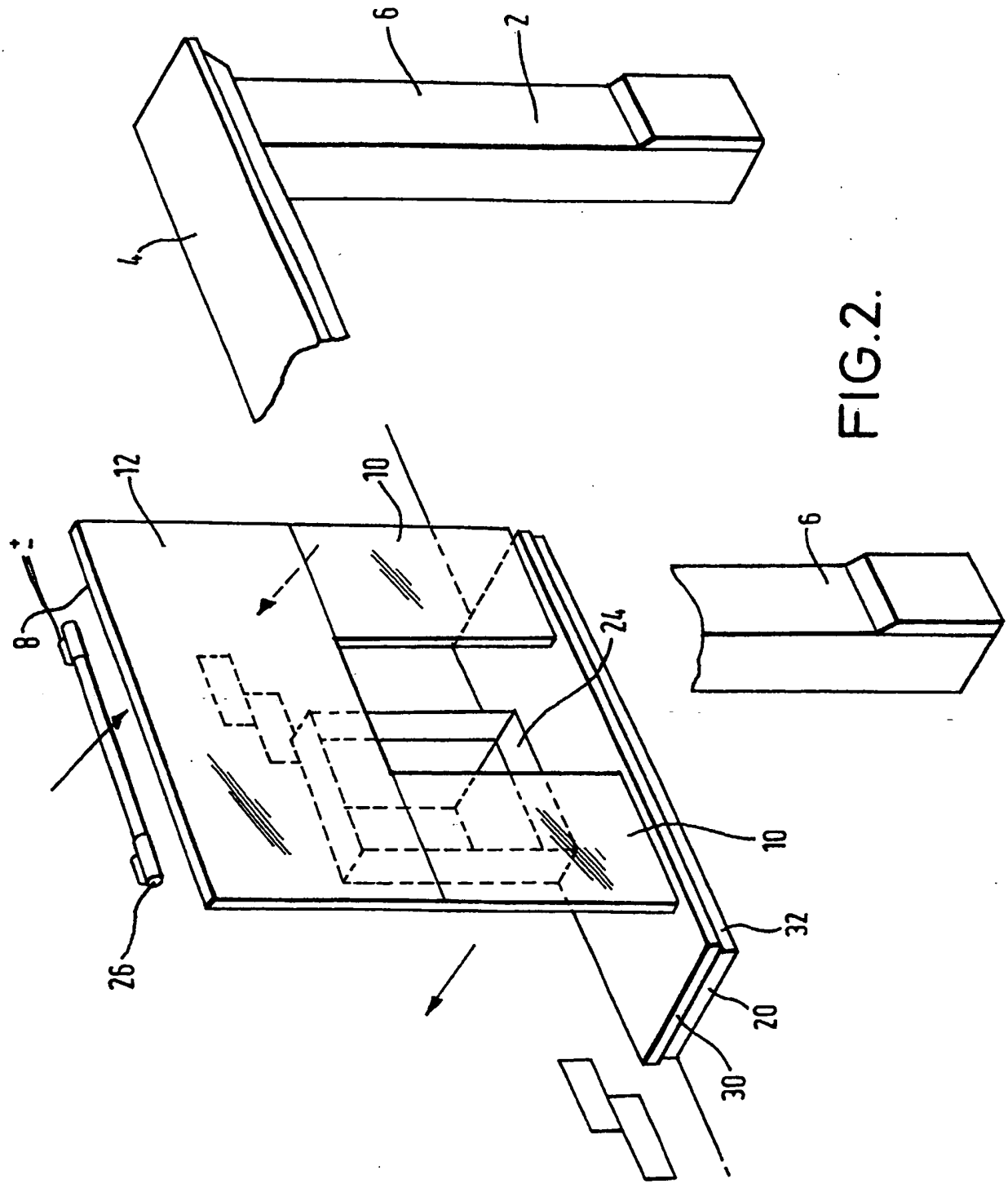

FIG.2.

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Fire Surround Assembly

This invention relates to a fire surround assembly, for use with a gas or electric fire, for example, in a room.

Such fire surround assemblies include a mantel and a mounting for the fire that, in the case of a gas fire, also comprises a venting tunnel that extends from the back of the fire through the mantel to a venting duct, for example a chimney. A back panel usually surrounds the fire and/or tunnel, typically on three sides, and may made from granite, marble, slate or limestone for example, or other non-combustible material

It is an object of the present invention to provide an improved fire surround assembly.

In accordance with one aspect of the present invention, there is provided a fire surround assembly comprising a mantel that is arranged to surround a fire and to be secured to a wall of a room, and a substantially planar display panel that is arranged to be secured between the mantel and the wall, the panel being visible from the front of the assembly adjacent the fire, wherein the display panel is translucent and/or transparent over at least part of its surface, and wherein a light source is mounted such that light therefrom is visible through the panel from the front of the assembly.

By arranging for the display panel to transmit light, and mounting a source of light such that the light therefrom is directed through the panel to the front of the fire surround, a variety of decorative effects can be achieved whilst still safely mounting a fire in the fire surround assembly.

Usually, the back panel, or display panel, will be mounted in the mantel such that the panel is spaced away from the wall, and then the light source may conveniently be located within that space so as to direct light onto the back of the panel. Alternatively,

the light source may direct light into the thickness of the display panel from one or more edges thereof.

Preferably the display panel is made of glass, which, being a non-combustible material, is particularly advantageous when the fire to be fitted into the assembly is a gas fire, which can be expected to deliver more heat to the display panel than would be the case with an electric fire.

It is envisaged that the display panel will be substantially planar, but in certain instances it may be curved to suit the mantel and fire.

One or both of the major surfaces of the display panel may be textured in order to ensure that it is translucent, or to enhance that effect. The texturing may be carried out by engraving or etching, for example acid etching, or sandblasting such that the display surface has a sculptured effect.

The decorative effect of the assembly of the invention may be enhanced by suitable choice of the colour of the light from the light source, by colouring the display panel itself, for example with paint, or by colouring any space behind the panel that is visible therethrough. It is also envisaged that the light source may be arranged to produce light of various colours, at various intensities, and at various positions across the display panel. The light decorative effect can also be enhanced by interposing between the light source and the panel, a rotatable spinner, hanging ribbons, for example of light reflective material and which may be caused to flutter by means of heat from the light source or by a small fan, mirrors, or coloured translucent light filters, which may be fixed or rotating.

In accordance with another aspect of the present invention, there is provided an arrangement that comprises a fire surround assembly in accordance with the first aspect together with a fire, which may be an electric fire, or a gas fire, and may include a flame

effect arrangement. When the fire is a gas fire, then the arrangement will advantageously include a gas tight fume-venting tunnel that is to be fitted to the rear of the fire, and that would then extend rearwardly therefrom through the display panel to a suitable venting duct, for example a chimney.

In accordance with a further aspect of the present invention, there is provided an arrangement comprising a mantel that is to be secured to a wall in the room and a substantially planar display panel contained within the mantel. The display panel may be as described above, but in this aspect of the invention there need not be provision for a fire.

In accordance with a yet further aspect of the present invention, there is provided a hearth for a fire place, comprising a substantially planar display panel that is translucent and/or transparent over at least part of its surface, and a light source mounted such that light therefrom is visible through the panel from above the hearth.

It will be appreciated that the display panel forming the hearth may be provided with features of the display panel and fire surround assembly as set out above, as appropriate.

The present invention thus provides an illuminated display panel that can conveniently be used with a mantel around a fire, or that can be provided with a mantel purely as a decorative arrangement, or that can be provided as a hearth, whereby light decorative effects can be achieved. Furthermore, when the panel is used with a fire such that heat therefrom can be transmitted to the panel, it is advantageous that it be made of a non-combustible material, such as glass.

When the display panel is mounted on a wall when combined with a mantel, or on a floor when combined with a hearth, it will be appreciated that the spacing distance from

the wall or floor can be maintained by suitable brackets in dependence on the light source that is to be used.

In a further embodiment, the light source may include fibre optic conductors such that the source of light itself may be spaced away from the panel, with the light being directed thereto through the optical fibres.

It will be appreciated that various lighting effects can be achieved, including a gentle shining of a soft and even glow from a large area of glass through the translucent panel. If a single light source is located adjacent the top of the panel, then a graduation of light will be achieved from that edge towards the opposite edge. More than one light source may be used to illuminate the panel.

It is to be understood that the display panel may comprise a single piece, or, two or more pieces, for example two upright sections disposed on either side of the fire, and a transverse section across the top thereof.

A display panel for use with an electric fire and a mantel in a fire surround assembly, will now be described, by way of example with reference to accompanying drawings; in which:

Figure 1 is a side elevation of the components of the fire surround assembly before being mounted to the wall of a room; and

Figure 2 is a partial perspective view of some of the components of Figure 1, prior to assembly.

Referring to the drawings, a mantel 2 of the fire surround assembly comprises a shelf 4 that extends horizontally and is supported at each end thereof on a corresponding upright pillar 6. A rectangular glass panel 8 comprises two laterally spaced apart

vertically extending sections 10 together with a lintel section 12. The glass panel 8 is received within the mantel 2 in a rebate 14 at the back of the mantel 2. Rearwardly-extending walls 16 of the mantel 2 extend from the grooved rebate 14 and abut a wall 18 of the room in which the assembly is to be mounted.

The mantel 2 containing the glass panel 8 is mounted on a hearth 20 that projects from the wall 18, so that when the mantel 2 is placed on the hearth 20 and secured by its walls 16 to the room wall 18, the walls 16 and the room wall 18 define a space behind the panel 8.

A gas fire 22 has a venting tunnel 24 attached to the rear thereof, and is mounted on the hearth 20 such that the mantel 2 surrounds the fire 22, with the tunnel 24 extending through the aperture defined by the panel sections 10 and 12 to communicate with a chimney (not shown) of the room. The location of the tunnel 24 in operation fitted in the wall 18 is shown in broken outline in Figure 2.

A fluorescent strip light 26 is mounted in the space between the glass panel 8 and the wall 18, contained within the mantel walls 16, and arranged to shine light onto the back surface of the glass panel 8. The walls of the mantel 2 and of the room that define the space behind the glass panel 8 are painted white, and the panel 8 is translucent, so that a graduated warm white glow is apparent over the surface of the panel 8 when the assembly is viewed from the front. The panel 8 extends vertically each side and across the top of the fire 22.

The hearth 20 comprises an upper glass panel 30 that is spaced by a rectangular frame 32 from the floor 34 of the room. A light similar to the light 26, but not shown, is mounted in the frame 32 such that a uniform glow of light is directed upwardly from the translucent glass panel 30 to the sides and in front of the fire 22.

It will be appreciated that various lighting effects discussed earlier may be provided within the frame work 16 of the mantel 2 and the frame 32 of the hearth 20, to provide various decorative effects around the fire 22.

Claims

1. A fire surround assembly comprising a mantel that is arranged to surround a fire and to be secured to a wall of a room, and a substantially planar display panel that is arranged to be secured between the mantel and the wall, the panel being visible from the front of the assembly adjacent the fire, wherein the display panel is translucent and/or transparent over at least part of its surface, and wherein a light source is mounted such that light therefrom is visible through the panel from the front of the assembly.

2. A fire surround assembly according to claim 1, wherein the assembly is arranged to be secured to the wall with the display panel displaced away therefrom, and wherein the light source is mounted in the space between the panel and the wall so as to direct light onto the back of the panel.

3. A fire surround assembly according to claim 1, wherein the light source is arranged to direct light into the thickness of the display panel from at least one edge thereof.

4. A fire surround assembly according to any one of the preceding claims, wherein the display panel is made of glass.

5. A fire surround assembly according to any one of the preceding claims, wherein the rear surface of the display panel is textured to provide or to enhance its translucence.

6. A fire surround assembly according to claim 5, wherein the texturing is carried out by an engraving or etching process so as to provide a sculpted effect.

7. A fire surround assembly according to any one of the preceding claims, wherein the light source and/or the display panel and/or any space behind the panel is selectively coloured.

8. A fire surround assembly according to any one of the preceding claims, wherein light from the light source is arranged to be varied in colour, and/or intensity and/or position as it impinges on the display panel.

9. A fire surround assembly according to claim 8, wherein movement of the impinging light is achieved by reflection from or interference by a rotating or fluttering body.

10. A fire surround assembly substantially as hereinbefore described with reference to the accompanying drawings.

11. An arrangement comprising a fire surround assembly according to any one of the preceding claims, and a fire mounted so as to be surrounded by the mantel.

12. An arrangement according to claim 11, wherein the fire comprises an electric fire.

13. An arrangement according to claim 11, wherein the fire comprises a gas fire, the arrangement comprising a fume-venting tunnel that is arranged to be fitted to the rear of the fire and to extend rearwardly thereof through the display panel of the surround assembly to a venting duct.

14. An arrangement comprising a mantel to be secured to a wall of a room, and a substantially planar display panel contained within the mantel, wherein the display panel is translucent and/or transparent over at least part of its surface, and wherein a

light source is mounted such that light therefrom is visible through the panel from the front of the assembly.

15. A hearth for a fire place, comprising a substantially planar display panel that is translucent and/or transparent over at least part of its surface, and a light source mounted such that light therefrom is visible through the panel from above the hearth.

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Application No: GB 0201524.6 **Examiner:** Tyrone Moore
Claims searched: 1-14 **Date of search:** 23 August 2002

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.T): E1X (XS), F4W

Int Cl (Ed.7): E04F (19/00), F24B (1/198), F24C (15/06, 15/12).

Other: ONLINE: WPI, EPODOC, JAPIO.

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
A	GB 2240171 A	(BRUNO ELECTRICAL LTD.) See figures 1-3, especially items 9, 10, and the description on page 4 at line 20 to line 7 on page 5.	
A	WO 00/03184 A1	(PERROTTA) See figures 1-4 and the description on page 3 at lines 1-30. This document describes *"Transparent fixed and movable walls for stoves, heat-circulation fireplaces, fireplaces .....The figure shows a heat circulation fireplace which is not working and where the front wall modified by the invention allows to see clearly the characteristics of the invention, changing the transparent wall into a decoration wall harmonized with the surroundings."*	
A	US 3333555	(BERTRAM) See figures 1-20, item 90, especially figures 16-20, and the description. This document discloses a shelf assembly with a flourescent light fitting disposed beneath.	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Application No: GB 0201524.6 **Examiner:** Tyrone Moore
Claims searched: 1-14 **Date of search:** 23 August 2002

Category	Identity of document and relevant passage		Relevant to claims
A	CA 1013532	(HETHERINGTON) See figures 1-5 and the description which illustrates a fireplace surround with a display panel constructed from a plurality of sections.	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.